

THE DETERMINANTS OF UNION ELECTION SUCCESS IN THE PUBLIC SECTOR: AN INTERSTATE ANALYSIS

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ABSTRACT

A large body of literature exists on the determinants of union election success in the private sector but the only extensive study for the public sector is that by Bronfenbrenner and Juravich [1]. They found that increased bargaining unit size and a higher state unemployment rate both decreased the probability of a union winning a certification election. This study extends the public sector literature by including a number of election determinants not used in the previous study. The new explanatory variables are the existence of a single state bargaining law, the percentage of unions with an AFL-CIO affiliation, voter turnout, and the presence of multiple unions on the ballot. This study also includes an alternative measure of union election success: the percentage of votes received by the winning union. One of the new variables, higher voter turnout, increased the percentage of union election wins in a state while a single state bargaining law, AFL-CIO affiliation, and higher voter turnout increased the percentage of votes of the winning union. It was also found that a higher public sector unionization rate and the presence of a right-to-work law in a state decreased both measures of union election success. The results were based on data for states that had certification elections in 1991 and 1992.

Though there is a large literature on the determinants of union success in certification elections for the private sector, there is not a corresponding literature for the public sector. The major public sector study was done by Bronfenbrenner and Juravich, who analyzed public sector elections in the early 1990s and found that only two variables significantly affected the probability of a union election win [1]. These were unit size and the state unemployment rate, which both decreased

the probability of union election success. In this study, which examines union election success at the state level, I extend the analysis by including potentially important factors omitted by Bronfenbrenner and Juravich [1]. These factors, with the latter three being common to private sector studies, are: presence of a single state bargaining law, type of union representation, voter turnout, and the presence of multiple unions on the ballot. In addition, the determinants of an alternative measure of union success will be investigated. While Bronfenbrenner and Juravich examined only the determinants of a union election win, this study also examined the determinants of the percentage of votes received by the winning union.

Beyond the paucity of public sector election studies, another reason for this study is to compare the results for the private sector to those of the public sector. Many of the same variables used in the private sector election studies will be employed here. As reported by Bronfenbrenner and Juravich, studies of private sector union elections have found that organizing “climate” variables, such as the unemployment rate, union density and right-to-work laws, have had a mixed or small effect on union election success [1]. The empirical analysis of this study will determine if these findings extend to the public sector.

The outline of the article is as follows: The second section reviews the literature and by necessity focuses on the findings of private sector election studies. The third discusses the data and empirical model, while the fourth examines the empirical results. The last part offers some conclusions and possible extensions of this research.

Literature Review

As noted above, the determinants of union certification elections in the private sector have spawned a large body of literature, and some general reviews of the literature are Fiorito, Gallagher, and Greer [2] and Heneman and Sandver [3]. In this literature, a whole host of variables have been used to explain union success in private sector certification elections. Following Scott, Seers, and Culpepper [4], these variables can be grouped into the following categories: environmental characteristics, organizational characteristics, bargaining unit characteristics, and election process characteristics. Environmental characteristics include economic variables such as the unemployment rate, the percentage of workers in unions, and the union relative wage gain. Studies by Krislov [5] and Roomkin and Juris [6] have shown that these types of economic variables significantly affect election outcomes. The expected effects of these variables will be discussed in more detail in the third section. Another large category of environmental variables measures the legal environment, with a common variable being the presence of right-to-work laws. In the private sector, studies by Becker and Miller [7] and Delaney [8] showed that right-to-work laws had little effect on the chances of union success in certification elections.

Organizational characteristics are characteristics of the employer and the union. On the employer side, Greer and Shearer [9] examined the effect of foreign ownership, while Sandver [10] examined the effect of employer industry. More relevant to this study, the characteristics of unions have been investigated, particularly the effect of union representation. One hypothesis is that workers are hostile to “big labor” representatives such as the AFL-CIO and more receptive to smaller, independent unions. Devinatz and Rich confirmed this hypothesis with their finding that AFL-CIO affiliation decreased the chances of success in certification elections [11]. In terms of bargaining unit characteristics, the effects of variables measuring unit size, the type of workers in the unit, organizing campaign techniques, workers’ attitudes toward unions, and demographic characteristics of the workers have been investigated. A common finding is that an increase in unit size leads to a lower victory rate for unions in certification elections. Recent examples of this finding are found in Scott, Seers, and Culpepper [4], Devinatz and Rich [11], and Heneman and Sandver [12]. In terms of the demographic characteristics of workers, Getman, Goldberg, and Herman found older workers are less likely to vote in favor of union representation. [13].

The last category is election process characteristic, which includes worker turnout, the number of unions on the ballot and the effect of delaying a certification election. Delaney [8] and Becker and Miller [7] have found that a low turnout favored union election success. Becker and Miller speculated that those most committed to union success are more likely to vote and also are a relatively small group [7]. Thus, a small voter turnout would disproportionately reflect the preferences of these voters. Dworkin and Fain showed that having more than one union on the ballot increased the chance of an election victory for the union [14]. Union competition may increase the awareness of the benefits of union representation or, alternatively, multiple unions may be attracted to firms where pro-union sentiment is high. Lastly, delaying a certification election is a means by which employers can gain time to mount an anti-union campaign and so make it more difficult for unions to maintain worker support. A study by Roomkin and Block supported this argument [15], while Scott, Seers, and Culpepper did not [4].

While the above studies investigated private sector certification elections, the study of public sector elections by Bronfenbrenner and Juravich followed the same approach [1]. Their study divided the explanatory variables into the following categories: economic climate, legal climate, and election-background variables. The first two categories corresponded to the environmental category discussed above, while the election background contained one bargaining unit variable, unit size, and one election-process variable, an election-delay measure. The economic climate variables included many of the variables used in the private sector studies listed above. Examples of these variables were the state unemployment rate, the ratio of public to private wages, and the percentage of public employees who are union members. However, the legal category included labor laws relevant only to the public sector. These laws were: full duty to bargain, union security provisions

(agency shop permitted and union shop permitted), and type of impasse procedure allowed (mediation, fact-finding, arbitration and strikes).

In the study by Bronfenbrenner and Juravich, the unit of observation was the individual bargaining unit, and they investigated the effect of each of these explanatory variables on the probability of a union election win [1]. Of the 23 explanatory variables in their regression, only two were significant. They found that a larger unit size significantly decreased the probability of a union election win and a higher state unemployment rate also significantly decreased the probability of a union election win [1]. Both of these findings confirm those of the numerous private sector election studies. Given the lack of significance of most of the variables in the sole major study available, a reexamination of the determinants of union election success in the public sector appeared warranted, and that was a major goal of this study.

DATA AND EMPIRICAL MODEL

The unit of observation in studies of certification elections has varied greatly. Some used the individual worker, some the election or bargaining unit, and others used countrywide or time-series data. Unlike Bronfenbrenner and Juravich, who used the individual bargaining unit as the unit of observation [1], this study used data aggregated at the state level.¹ Data for certification elections were collected for 1991 and 1992 for all those states that had conducted certification elections in those years. These elections were held at all levels of government from the state to the local level. This yielded a sample size of 61 observations. The years and sources for all the variables are listed in the appendix.

Two separate regressions were run with the difference between them being the specification of the dependent variable. Each dependent variable is a measure of union success in certification elections. In the first regression, the dependent variable is the percentage of total certification elections in a state won by the union. In the second regression, the dependent variable is the average percentage of votes received by the winning union in a state's certification elections. The explanatory variables are identical for both estimation equations and those variables are discussed below. Both regressions were estimated using ordinary least squares (OLS).

¹ Data for Washington, D.C., are also included in the sample. Although my sample includes this city, I will refer to all variables as being measured at the state level. States included in the sample are: Alaska, California, Connecticut, Delaware, Florida, Iowa, Illinois, Indiana, Kansas, Massachusetts, Maine, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, Nevada, New York, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Vermont, Washington, and Wisconsin. All of these states except Indiana had elections in both 1991 and 1992.

For each regression the explanatory variables are divided into the four categories of election determinants. The first category, which contains the largest number of variables, includes all the environmental characteristics and these can be further divided into economic and legal climate variables. The first economic climate variable is the state unemployment rate, and higher levels of unemployment should have a negative effect on both the union win rate and the percentage of votes received by the winning union. In periods of high unemployment, the alternative job opportunities of workers are limited, and so the potential costs of unionization are increased. In addition, as argued by Bronfenbrenner and Juravich [1], government revenues are reduced in periods of high unemployment, and this could lead to greater resistance to unionization by state and local governments.

The percentage of public sector employees unionized in a state is the second measure of the economic climate, and higher levels of unionization should have a negative effect on both election outcome variables. Those public employees who unionize first in a state would be those most favorable to unions, and so, as the unionization rate increases, the workers to be organized are those who tend to be resistant to joining unions. The last economic climate variable is the ratio of public sector union wages to public sector nonunion wages in a state. A higher ratio should increase both union election success measures because higher ratios indicate a greater wage payoff to belonging to a public sector union.

The remainder of the environmental variables are those that reflect the legal climate in the public sector. The first is a binary variable that equals one if a state has a single bargaining law which covers all the unionized public employees in a state and equals zero, otherwise. Generally, states with a single bargaining law have a legal environment more favorable for public employee unions than states with multiple bargaining laws. Therefore, this variable should have a positive effect on both union election success variables. The next two legal variables are indices, with the first measuring union security provisions and the second measuring the available impasse procedures. The union security index was formed by assigning a value of one to a state if an agency shop or union shop were permitted, summing these values, and then dividing this sum by two. The second index was formed by assigning a value of one to a state if mediation, arbitration, or strikes were permitted, summing these values, and then dividing this sum by three. Higher values for these indices should have a positive effect on union election success, since higher values indicate a more favorable legal environment for public sector unions. Specifically, the existence of union security laws facilitates union organizing by lessening the free-rider problem. For the second index, the existence of various impasse procedures makes it easier for public employee unions to achieve their goals and so increase the benefits of being a union member. In addition, higher values for these indices may reflect a greater acceptance of unions by the working population in a state.

The last legal variable is the existence of a state right-to-work law, and it should have a negative effect on union election success. States with right-to-work laws are said to have working populations who are more hostile to unions and so would be less likely to vote in favor of unionization. Compared to the private sector, where bargaining laws are more standardized, accounting for the varied legal environment in the public sector is crucial when examining the determinants of certification elections.

Average unit size is the sole bargaining unit variable and, as noted above, a common finding is that a larger unit size leads to a smaller probability of union electoral success. Different rationales are offered for this negative effect. Cooke argued that in smaller bargaining units it is easier for pro-union workers to communicate the benefits of unionism and it is also easier to maintain a cohesive pro-union campaign [16]. Delaney made the case that in smaller bargaining units fewer workers have to be persuaded of the benefits of unionism [8]. Lastly, Becker and Miller hypothesized that in any large group, there is a greater variability in the attitudes of workers, which increases the probability of anti-union workers [7]. In the category of organizational characteristics, there is also one variable, and it measures the effect of the type of union representation on union election success. The representation variable is defined as the percentage of certification elections in states that have an AFL-CIO-affiliated union on the ballot. In the private sector, Devinatz and Rich found that AFL-CIO-affiliated unions had a smaller probability of election victories [11]. What is the explanation for this result? Kochan traced worker antipathy to "big labor" to the belief that leaders of large unions were more concerned about their own well-being than the well-being of the rank and file workers [17]. Devinatz and Rich offered alternate interpretations of this negative view of large unions [11]. One interpretation is that in large organizations, including unions, there is a more severe principal agent-problem than in smaller, independent unions. Another interpretation is that it is more difficult for large unions with diverse memberships to represent the views of smaller groups within their membership. A third, more general interpretation, concerns the optimal size of organizations, including unions. Large unions may have increasing costs of serving their members because of information problems, higher administrative costs, and greater difficulty in coordinating their activities. All of these factors will tend to cause union members to choose smaller, independent unions as opposed to large, nationally-oriented unions.

In the category of election-process characteristics, there are two variables whose effects were discussed above. The first is the average turnout in certification elections in a state. Higher worker turnouts should have a negative effect on union election success. The second electoral variable is the percentage of elections in states that have more than one union on the ballot. Recall that union competition is associated with an increase in union success in certification elections.

EMPIRICAL RESULTS

Table 1 shows the regression results, and I first discuss the estimated coefficients in the column where the dependent variable is the percentage of union election wins in a state. Of the economic variables in the environmental-characteristics category, only the percentage of public employees unionized in a state had a significant effect on the union win rate. As expected, a higher unionization rate in a state decreased the union win rate. Though it had the expected sign, the unemployment rate did not significantly affect the union win rate. In addition, an increase in the ratio of union to nonunion wages in the public sector did not significantly affect the union win rate. Of the legal variables in the environmental category, only the existence of a right-to-work law significantly affected the union win rate and as expected, it decreased the union win. Moreover, this effect was quite large.

In the bargaining-unit category, unit size, opposite to expectations, had a positive effect on union win rate but the coefficient was insignificant. Thus, contrary to a common finding in private sector studies, a larger bargaining unit did not decrease union win rates in the public sector. The sole variable in the organizational category, the percentage of unions in state elections with an affiliation with the AFL-CIO, had no effect on the union win rate. For win rates at least, being affiliated with “big labor” has no negative effect on union election success. In terms of the election process characteristics, opposite to expectations, a higher voter turnout significantly increased the union win rate. Thus, unlike the private sector, mobilizing a higher turnout actually increased the chance of union election success. Conversely, the presence of multiple unions on the ballot had a negative but insignificant effect on union win rates.

In the second column of Table 1 are the results of the regression where the dependent variable was the average percentage of votes received by the winning unions in a state. In the environmental category, as in the first regression, only the percentage of public employees unionized in a state had a significant effect. As expected, it decreased the winning percentage of votes, and so in both regressions a higher level of unionization made it more difficult for union election success. Thus, it appears that with higher levels of unionization in the public sector, those workers that remain to be organized are those who are most resistant to joining unions. Again, the unemployment rate had no effect, and this may reflect the period of the data. There was a recession during this time, and the poor economic conditions may have had a common effect in all the states in the sample.

Of the legal variables, the existence of a single bargaining law covering all public employees in a state had a significant effect on the votes received by winning unions. As predicted, a single bargaining law increased the percentage of votes received, and the effect was large. Recall that, in general, single bargaining laws are more favorable to unions and so facilitate union organization and bargaining success.

Table 1. Determinants of Union Election Success

	Percentage of union election wins in a state	Percentage of votes received by winning union
Environmental Characteristics		
Economic Climate		
State unemployment rate	-.69 (-.37)	-.64 (-.50)
Percentage of public employees unionized in a state	-.44** (-2.44)	-.35*** (-2.79)
Ratio of state public sector union to non-union wages	-.40 (-1.21)	.09 (.40)
State Legal Climate		
Single public sector labor law	10.62 (1.33)	12.70** (2.28)
Union security index	-.009 (-.07)	.03 (.41)
Impasse procedure index	-.03 (-.31)	-.14* (-1.72)
Right-to-work law	-18.64** (-2.60)	-9.16* (-1.82)
Bargaining Unit Characteristics		
Average unit size	.03 (1.56)	.005 (.32)
Organizational Characteristics		
Percentage of unions with an AFL-CIO affiliation	-.04 (-.57)	.10* (1.91)
Election Process Characteristics		
Average voter turnout	.65** (2.41)	.43** (2.27)
Multiple unions on the ballot	-.02 (.15)	-.08 (-.76)
Constant	58.82** (2.41)	57.64*** (3.38)
Adj. R^2	.11	.27
N	61	61

Notes: T -ratios are in parentheses. Asterisks denote significance at the 1 percent (***), 5 percent (**), and 10 percent (*) levels.

Of the remaining legal variables, the impasse procedure index unexpectedly had a significant negative effect on the percentage of votes received by the winning union. The reason for this negative effect is not readily apparent. Like the first regression, a right-to-work law significantly decreased the votes received by the winning union, and again the effect was large. Thus, for the public sector, the legal environment has an important effect on the votes received by the winning union,

and unlike the private sector, right-to-work laws had a significant and large negative effect on union election success.

The one bargaining unit variable, unit size, had no significant effect on the percentage of votes of the winning union. In the private sector, unit size generally decreases union election success. Why the lack of such an effect in the public sector? Recall that various studies have argued that it is easier for pro-union factions to organize smaller bargaining units than larger ones. As reported by Bronfenbrenner and Juravich, bargaining units in the public sector tend to be smaller than those in the private sector [1]. In the private sector, 80.7 percent of elections took place in bargaining units of 49 workers or less. In the private sector, the comparable figure was 64.3 percent. Thus, for unions in the public sector, unit size does not appear to be an obstacle to their organizing efforts because bargaining units tend to be relatively small. In this environment, pro-union factions can have a disproportionate influence. Turning to the one organizational variable, AFL-CIO affiliation, it unexpectedly increased the percentage of votes of the winning union. This significant effect contradicts the findings for certification elections in the private sector. For those workers who supported the winning union, union affiliation with the AFL-CIO did not appear to raise fears of being represented by “big labor.” In the sample for this study, 58 percent of state certification elections had AFL-CIO affiliates on the ballot. Given the large percentage of AFL-CIO-affiliated unions involved in public sector certification elections, workers may be more familiar with large labor organizations and so be less suspicious of them.

The last two variables are the election process variables, and the results were the same as those for the first regression. Higher turnouts led to a higher percentage of votes for winning unions. Again, this result may be associated with the relatively small bargaining units found in the public sector. Recall that it was argued that those most committed to union success are more likely to vote and also are a relatively small group compared to the whole bargaining unit. Given the small size of bargaining units in the public sector, voting levels will tend to be high and disproportionately made up of those who support unionization. Like the first regression, having multiple unions on the ballot had no effect on the votes received by the winning union. This result also contradicts the findings of various private sector studies, which showed an increase in certification success when unions competed in certification elections.

CONCLUSION

Because of the scarcity of studies, one purpose of this study was to reexamine the determinants of union election success in the public sector. Unlike the earlier study by Bronfenbrenner and Juravich [1], new factors, such as the existence of a single public sector bargaining law, the type of union representation, voter turnout and having multiple unions on the ballot, were included in the regression

specification. In addition, not only were the determinants of union win rates examined, but so were the determinants of the percentage of votes received by the winning union.

Important differences were found between this study and the previous one. In the first regression, where the union win rate was the dependent variable, higher voter turnout decreased union win rates. This variable had been omitted from the earlier study. Even those variables common to both studies had different effects. While Bronfenbrenner and Juravich found that a higher unemployment rate and unit size decreased union election wins [1], in this study neither of these variables affected union win rates at the state level. On the other hand and unlike the earlier study, higher union density in the public sector decreased union win rates. In the second regression, where the percentage of votes for the winning union was the dependent variable, two variables not included in the earlier study, type of union representation, and voter turnout, both increased the number of votes received. Thus, the addition of new variables showed that they had significant effects on the two different measures of union election success.

Another purpose of the study was to compare the determinants of the public sector elections to those for private sector elections. For both dependent variables, this study found that higher voter turnout had a positive effect, which was opposite to the effect found for private sector union elections. As discussed above, the reason for this may be related to the fact that bargaining units are smaller in the public sector.

Another important difference with private sector studies was the effect of the type of union representation. Whereas in the private sector AFL-CIO affiliation decreased union election success, in this study, AFL-CIO affiliation increased the percentage of votes received by the winning union. Again, this difference may be related to the smaller bargaining units found in the public sector. Given the differences found between the public sector elections in this study and the results for private sector elections, further exploration of public sector elections would be appropriate. One possible extension of this research would be to investigate more direct measures of a state's political climate. For example, including variables that measure the party affiliation of a state's voters and legislators might yield some interesting results.

APPENDIX
Sources of Variables

Variable	Year collected	Sources
Percentage of union election wins in a state	1990-1991	[1]
Percentage of votes received by the winning union state unemployment rate	1990-1991	[1]
Percentage of public employees unionized in a state	1993	[18]
Ratio of state public sector wages to private sector wages	1993	[18]
Single public sector labor law	1992	[19]
Agency shop permitted	1992	[19]
Union shop permitted	1992	[19]
Mediation permitted	1992	[19]
Arbitration permitted	1992	[19]
Strikes permitted	1992	[19]
Right-to-work law	1990-1991	[20]
Average unit size	1990-1991	[1]
Percentage of unions with an AFL-CIO affiliation	1990-1991	[1]
Average voter turnout	1990-1991	[1]
Multiple unions on the ballot	1990-1991	[1]

* * *

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